Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Please substitute the following listing of claims for the previous listing of claims:

1. (Currently amended) A method for the pulmonary administration of a dry powder composition from a passive dry powder inhaler to the respiratory tract of a patient, the method comprising:

providing a dry powder composition comprising particles comprising a <u>hollow and porous</u> lipid matrix and an active agent, and the particles having a particle size of 1-30 0.5 to 20 microns, mass median aerodynamic diameter of less than <u>about</u> 5 microns, and <u>the powder comprising a</u> bulk density of less than 0.5 g/cm³;

loading the dry powder composition into a passive dry powder inhaler having a resistance of from 0.01 to 0.30 $(cmH_20)^{4/2}/Lmin^{-1}$ an inhalation flow rate range of about 10 to about 60 L/min; and

administering the dry powder composition from the inhaler to the respiratory tract of a patient,

wherein the emitted dose is at least 60% and a lung deposition is at least 25% over substantially the flow rate range of the inhaler the lung deposition is greater than 25% for flow rates from 10 to 60 liters per minute.

2-4. (Cancelled)

5. (Previously presented) A method according to claim 1 wherein the lipid comprises a phospholipid selected from the group consisting of dipalmitoylphosphatidylcholine, distearoylphosphatidylcholine, diarachidoylphosphatidylcholine, dibehenoylphosphatidylcholine,

diphosphatidyl glycerol, phosphatidylcholines, saturated phosphatidylethanolamines, saturated phosphatidylserines, saturated phosphatidylglycerols, and saturated phosphatidylinositols.

- 6-12. (Cancelled)
- 13. (Original) A method according to claim 1 wherein the lung deposition is greater than 50%.
- 14. (Currently amended) A method according to claim 1 wherein the active agent is selected from the group consisting of budesonide, tobramycin sulfate, leuprolide acetate, amphotericin B, ciprofloxacin, and parathyroid hormone.
- 15-28. (Cancelled)
- 29. (Currently amended) A method for the pulmonary administration of a dry powder composition from a passive dry powder inhaler to the respiratory tract of a patient, the method comprising:

providing a dry powder composition comprising hollow and porous particles comprising:

- (i) a lipid phospholipid matrix comprising a phospholipid selected from the group consisting of dipalmitoylphosphatidylcholine, distearoylphosphatidylcholine, diphosphatidylcholine, diphosphatidylcholine, diphosphatidyl glycerol, phosphatidylcholines, saturated phosphatidylethanolamines, saturated phosphatidylglycerols, and saturated phosphatidylinositols;
 - (ii) an active agent comprising tobramycin sulfate;
 - (iii) a particle size of 1-30 0.5 to 20 microns; and
 - (iv) a mass median aerodynamic diameter of less than 5 microns; and
 - (v) a bulk density of less than 0.5 g/cm³;

loading the dry powder composition into a passive dry powder inhaler having a <u>range of</u> inhalation flow rates resistance of from 0.01 to 0.30 (cmH₂0)^{4/2}/Lmin⁻¹; and

administering the dry powder composition from the inhaler to the respiratory tract of a patient,

wherein the <u>a FPF_{4+F}</u> fine particle fraction (FPF_{4+F}) emitted from the inhaler is at least 60% as determined by an Anderson Cascade Impaction or multi-stage liquid impinger, <u>an emitted dose is at least about 60%</u>, and is substantially independent of an inhalation flow rate, <u>and wherein a lung deposition is greater than 25%</u>, an interpatient variation in lung deposition is less than about 6%.

30-34. (Cancelled)

Add new claims 35-47 as follows:

- 35. (New) The method of claim 1 wherein a FPF_{4+F} fine particle fraction emitted from the inhaler is at least 60% as determined by an Anderson Cascade Impaction or multi-stage liquid impinger.
- 36. (New) The method of claim 1 wherein the particles further comprise a metal cation.
- 37. (New) The method of claim 1 wherein the metal cation comprises calcium.
- 38. (New) The method of claim 1 wherein a difference between lung deposition at about 30 LPM and lung deposition at about 90 LPM is about 11% or less, as measured by FPF_{4+F}.
- 39. (New) The method of claim 1 wherein the active agent comprises tobramycin, and an intrasubject dose variability is about 6% or less.
- 40. (New) The method of claim 1, where a variation in FPF_{4+F} with inhalation flow rate is less than about 20%.

41. (New) The method of claim 1 wherein an interpatient variation in lung deposition is less than about 17%.

42. (New) A powder for inhalation comprising:

particles comprising an active agent and a phospholipid matrix wherein the particles are characterized by a hollow and/or porous matrix, a size of about 0.5-20 microns, a MMAD of less than 5 microns, and wherein the powder is characterized by a bulk density less than 0.5 g/cm²; and

the powder, when used with a passive dry powder inhaler device, provides an emitted dose and a lung deposition substantially independent of an inhalation flow rate, and wherein a variation in lung deposition, as measured by a FPF_{4+F}, is less than about 20%.

- 43. (New) The particles of claim 42 further comprising a metal cation.
- 44. (New) The particles of claim 43 further wherein the metal cation comprises calcium.
- 45. (New) The powder of claim 42 wherein the active agent comprises tobramycin, and a difference between lung deposition at about 30 LPM and lung deposition at about 90 LPM is about 11% or less, as measured by FPF_{4+F}.

46. (New) A kit comprising:

a passive dry powder inhaler, having a resistance of from 0.01 to 0.30 (cmH₂0)¹/²/Lmin⁻¹ and permitting an inhalation flow rate range of about 10 to about 90 L/min; and

a powder for inhalation, the powder comprising particles comprising an active agent and a phospholipid matrix wherein the particles are characterized by a hollow and/or porous matrix, a size range of about 0.5 to 20 microns, a MMAD of less than about 5 microns, and wherein the powder is characterized by a bulk density less than about 0.5 g/cm²; and wherein an emitted dose is at least about 60%, and is substantially independent of an inhalation flow rate, and

wherein an interpatient variation in lung deposition is less than about 17%, and wherein an intrapatient variation in lung deposition is less than about 6%.

47. (New) A method for inhalation of a dry powder drug with reduced variability in the lung dose comprising:

providing a dry powder drug composition comprising particles comprising a lipid matrix and a particle size of 1-30 microns, mass median aerodynamic diameter of less than 5 microns, and a bulk density of less than 0.5 g/cm³;

loading the composition into a passive dry powder inhaler; and

inhaling the drug composition from the inhaler resulting in lung deposition wherein a variability between patients at a single flow rate is less than about 17%, and a variability with flow rate is less than about 20%.